

**ANTIFUNGAL PROPERTIES OF ESSENTIAL OIL  
*Cymbopogon nardus*, *Cymbopogon citratus*, AND  
*Leptospermum brachyandrum* AGAINST  
PHYTOPATHOGENIC FUNGI *Fusarium spp.***

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## ABSTRACT

ANTIFUNGAL PROPERTIES OF ESSENTIAL OIL *Cymbopogon nardus*, *Cymbopogon citratus*, AND *Leptospermum brachyandrum* AGAINST PHYTOPATHOGENIC FUNGUS *Fusarium spp.*

The *Fusarium spp.* was frequently responsible for the postharvest losses particularly due to fungal invasions. Essential oil was studied as alternatives to synthetic pesticides needed to sustain quality of plant sources. The present study was conducted to determine the size of inhibition zone of three essential oil *Cymbopogon nardus*, *Cymbopogon citratus* and *Leptospermum brachyandrum* against phyto-pathogenic fungal strain *Fusarium spp.* This research was used to identify potential biosynthetics essential oil based on size of inhibition zone to continue with minimum inhibitory concentration. The 100 µl spore suspension of *Fusarium spp.* was inoculated in a PDA media with 5µl of essential oil on paper disc together with negative control DMSO and positive control Ridomil fungicide for incubation of 72 hours at 24°C. The largest inhibition zone diameter was *C. citratus* with the final size of 1.75 mm. The minimum inhibitory concentration (MIC) of *Fusarium spp.* was tested with the most efficient oil among all three that was *C.citratus* at the concentration of 20% that is 0.2mg/ml which is the lowest concentration of the oil that is able to suppress the growth of mycelia. Considering these results it would be very useful to promote the crop culture of plants with *C. citratus* oil in order to guarantee of quality and healthier postharvest.